

**MARYLAND DEPARTMENT OF TRANSPORTATION  
MARYLAND AVIATION ADMINISTRATION**

**Tenant Improvements Section**

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**INSPECTION TESTS**

<b>Test No.</b>	<b>Test</b>	<b>Reference</b>	<b>Procedure</b>	<b>Submittals Required</b>
<b>P-1</b>	<b>Drainage and Vent Water Test</b> <i>[Provide P-1 or P-2]</i>	IPC 312.2	As per IPC 312.2; IPC 104.4	<p>Plumbing contractor’s standard form or letter indicating the following: Pipe Line/Equipment/Service being tested, Location [highlight test boundaries on plumbing drawings], piping material, specification test pressure, method of testing, time test started, time test ended, beginning and ending pressures, duration of test, name of foreman or witnesses with signature(s).</p> <p>The form / information shall be submitted to the inspector having jurisdiction at the time occupancy is granted.</p>
<b>P-2</b>	<b>Drainage and Vent Air Test</b> <i>[Provide P-1 or P-2]</i>	IPC 312.3	As per IPC 312.3; IPC 104.4	<p>Plumbing contractor’s standard form or letter indicating the following: Pipe Line/Equipment/Service being tested, Location [highlight test boundaries on plumbing drawings], piping material, specification test pressure, method of testing, time test started, time test ended, beginning and ending pressures, duration of test, name of foreman or witnesses with signature(s).</p> <p>The form / information shall be submitted to the inspector having jurisdiction at the time occupancy is granted.</p>
<b>P-3</b>	<b>Water Supply System Test</b>	IPC 312.5	As per IPC 312.5 ; IPC 104.4	<p>Plumbing contractor’s standard form or letter indicating the following: Pipe Line/Equipment/Service being tested, Location [highlight test boundaries on plumbing drawings], piping material, specification test pressure, method of testing, time test started, time test ended, beginning and ending pressures, duration of test, name of foreman or witnesses with signature(s).</p> <p>The form / information shall be submitted to the inspector having jurisdiction at the time occupancy is granted.</p>

<p><b>P-4</b></p>	<p><b>Backflow Prevention Assemblies</b></p>	<p>IPC 312.9</p>	<p>As per IPC 312.9</p>	<p>A letter of acceptable test certification shall be submitted to the inspector having jurisdiction upon installation completion and before service.</p>
<p><b>G-1</b></p>	<p><b>Gas Pressure Test</b></p>	<p>NFG 8.1, NFG 8.2; Tenant Design Criteria, Plumbing, K, Page 31.</p>	<p>As per NFG 8.1, 8.2</p>	<p>Plumbing contractor’s standard form or letter indicating the following: Pipe Line/Equipment/Service being tested, Location [highlight test boundaries on plumbing drawings], piping material, specification test pressure, method of testing, time test started, time test ended, beginning and ending pressures, duration of test, name of foreman or witnesses with signature(s).</p> <p>The form / information shall be submitted to the inspector having jurisdiction at the time occupancy is granted.</p>
<p><b>A-1</b></p>	<p><b>Waterproofing Flood Test</b></p>		<p>The test and the procedure shall be as follows:</p> <p><u>The Flood Test</u> The contractor or his/her sub will install the floor waterproofing membrane system prior to installation of finish floor. Food service areas (excluding seating areas) will be dammed and flooded with one inch height of water for a period no less than one hour to check for leaks. Once the test is complete, the contractor shall submit a letter reporting date and outcome of the test.</p> <p><u>Execution of the Test</u> The following steps will be taken prior to and during the test: 1. For critical areas, identified by MAA inspector, BAA will obtain a TIA. 2. BAA shall coordinate a pre-construction meeting prior to the test. The meeting shall be attended by BAA, MAA inspector, and tenants/MAA offices identified in the TIA. During this meeting, strategy to protect equipment and people as well as scheduling of the test shall be discussed. 3. During the test itself, the contractor shall station at least couple of workers at the floor area below to monitor any leaks. Protective measures shall include but not be limited to providing plastic sheets with drain plugs and</p>	<p>Form or letter from the installer indicating test procedure used; certification that the installation complies with manufacturer’s recommended procedures and warranty requirements. If area partially tested, include a sketch showing area tested.</p> <p>The form / information shall be submitted to the inspector having jurisdiction at the time occupancy is granted.</p>

			<p>containers.</p> <p>4. Sanitary system testing shall be carried out before flood testing. And drain pans, if required, shall be installed before the test.</p> <p>5. Once the test is complete, the contractor will restore the floor area below to its original condition.</p>	
<b>M-1</b>	<b>Hydronic Pipe Tests</b>	IMC 1208; IMC 107.1.2.3	As per IMC 1208	Plumbing contractor’s standard form or letter indicating the following: Pipe Line/Equipment/Service being tested, Location [highlight test boundaries on plumbing drawings], piping material, specification test pressure, method of testing, time test started, time test ended, beginning and ending pressures, duration of test, name of foreman or witnesses with signature(s).
<b>M-2</b>	<b>HVAC Controls and Balancing Report</b>	IMC 104, IMC 105 ASHRAE 111 SMACNA 221	<p>As per IMC 403.3.4, IMC 104.4; IMC 105.3</p> <p>Final system testing, balancing and adjustments shall be performed by an independent contractor, certified by the National Environmental Balancing Bureau (NEBB), Associated Air Balance Council (AABC) or other approved agency. Perform test readings on fans, units, coils, etc. and adjust equipment to deliver specified amounts of air and water.</p> <p>Balance air systems to within plus or minus 10 percent for terminal devices and branch lines and plus or minus 5 percent for main ducts and air handling equipment of the amount shown on the drawings. Further adjustments shall be made to obtain uniform temperatures in spaces. Adjust equipment to operate as intended by the specification. Align bearings and replace bearings that indicate wear and unacceptable material with new bearings at no additional cost to the owner. Balance contractor shall provide in the report any improperly installed or missing devices that that would negatively alter the proper operation of the system.</p> <p>Adjust thermostats and control devices as indicated to meet the design intent. Adjust and replace all necessary parts and equipment for proper and efficient operation. The Architect shall receive a certification from the contractor</p>	Prepare testing and balancing report log showing air supply quantities, water GPM, air entering and leaving temperatures and pressures, fan and unit test readings, etc. and submit <b>two copies</b> (each) of the preliminary compilation data to the airport authority for evaluation and approval before final inspection of the project. Provide <b>final</b> testing and balancing report within <b>70 days</b> from the date of final inspection.

			<p>of adjustments and that have provided a properly and satisfactory operating system. Adjustments shall be made for uniform and suitable temperatures in all spaces. Automatic temperature controls shall be adjusted and calibrated. Check, confirm and verify the proper sequencing of system safety interlock devices and operation.</p>	
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Notes: Systems shall be tested in the presence of the Inspector. MAA reserves the right to order additional tests or modify procedures as required by applicable codes, MAA Design Standards, and as specified in permit drawings/specifications.

LEGEND:

IPC: International Plumbing Code 2006

NFG: National Fuel Gas Code

IMC: International Mechanical Code 2006

ASHRAE: American Society of Heating, Refrigerating and Air-Conditioning Engineers

SMACNA: Sheet Metal and Air-Conditioning Contractor's National Association